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EXAMINER

DESAI, ANISH P

ART UNIT PAPER NUMBER

1771

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,527

Applicant(s)

YOSHIDA ET AL.

Examiner

Anish Desai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The applicant's arguments in response to the Final Office action dated 04/19/06 and the Advisory action dated 09/07/06 have been fully considered.

1. All of the art rejections are maintained.
2. A new ground of rejection is made over JP 11-189762 in view of Yamamoto et al. (US 6,258,426B1).

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 and 10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nagamoto et al. (US 6,139,953) substantially as set forth in 04/19/06 Office action.

Nagamoto teaches an adhesive tape comprising a base material that can be used as a base sheet of an adhesive tape wherein the base material comprises a urethane acrylate oligomer (Abstract and Column 3, lines 55-58) and an adhesive layer formed on the base sheet (Column 3, lines 4-6). Further, in Example 1, Nagamoto

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teaches liquid resin layer comprising urethane acrylate was applied on a PET film of thickness of 38 μm by means of a fountain die technique to make a resin layer of 100 μm in thickness and subsequently irradiating to cure the resin layer (Column 5, lines 41-57). Moreover, Nagamoto teaches an acrylic adhesive agent was applied on the base sheet (Column 6, lines 44-46) to form the adhesive tape. Thus, the PET film of Nagamoto reads on the first film comprising material different from that of the composite film, the first film laminated on one side of the composite film as claimed in the present invention. Moreover, the resin layer comprising urethane acrylate of Nagamoto reads on the claimed composite film as claimed in the present invention and acrylic adhesive of Nagamoto reads on the pressure sensitive adhesive layer as claimed. With respect to claims 8 and 10, the thickness of the PET film of Nagamoto is 38 μm and the thickness of the resin layer comprising urethane acrylate oligomer is 100 μm read on the claim limitation of claims 8 and 10.

With respect to claim 4, the recitation "...a film obtained by reacting polyol and polyisocyanate in a radical polymerizable monomer to form urethane polymer, coating a mixture of the urethane polymer and the radical polymerizable monomer on the first film and irradiation a radiation onto the coating to cure it" is directed to product by process limitations. The products by process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "Even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious

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from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985).

Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). In the instantly claimed subject matter, applicant is using urethane polymer and radical polymerizable monomer such as acrylic monomer (specification) to form a composite film that is formed of urethane/acrylic (urethane acrylate). Nagamoto also teaches a base material comprising a liquid resin wherein the liquid resin comprises urethane acrylate oligomer (Column 3, lines 4-11). Further, the liquid resin of Nagamoto is applied on a PET film and cured it using the radiation (Example 1). Thus, the base material of Nagamoto is similar to the composite film of the applicant.

With respect to claims 1,2, 6, and 7, Nagamoto teaches claimed invention except the pressure sensitive adhesive sheet has a modulus of 15 N/mm^2 or more and 250 N/mm^2 or less when an oblong piece of the pressure sensitive adhesive sheet with a width of 20 mm is bent at a radius of curvature of 3.0 mm, composite film has storage modulus of at 25°C of less than $2.0 \times 10^8 \text{ Pa}$ and a storage modulus at 100°C of $3.0 \times 10^8 \text{ Pa}$ or more, and the first film has a storage modulus at 25°C of $2.0 \times 10^8 \text{ Pa}$ or more. However, it is the examiner's position that the adhesive tape of Nagamoto necessarily has modulus of 15 N/mm^2 or more and 250 N/mm^2 or less when an oblong piece of the

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pressure sensitive adhesive sheet with a width of 20 mm is bent at a radius of curvature of 3.0 mm, the base material of Nagamoto has the storage modulus at 25°C of less than 2.0×10^8 Pa and a storage modulus at 100°C of 3.0×10^8 Pa or more, and the PET film of Nagamoto has a storage modulus at 25°C of 2.0×10^8 Pa or more, because like materials have like properties. The pressure sensitive adhesive sheet of the applicant comprises a composite film comprising urethane polymer and vinyl polymer wherein the first film is laminated on one side of the composite film, and a pressure sensitive adhesive layer is formed on the other side of the composite film. Further, the applicant is using acrylic type monomer as vinyl monomer. Moreover, the applicant is disclosing PET film as a preferred material for the first film (specification). Additionally, the applicant is disclosing an acrylic based pressure sensitive adhesive as a preferred adhesive (specification). Nagamoto also teaches an adhesive tape wherein the adhesive tape is formed by applying an acrylic adhesive on the base sheet (Column 6, lines 42-46) wherein the base sheet is prepared by applying liquid resin comprising urethane acrylate oligomer to a support film formed of PET and then irradiating the liquid resin to cure it (Example 2).

Therefore the presently claimed properties of the pressure sensitive adhesive sheet has a modulus of 15 N/mm² or more and 250 N/mm² or less when an oblong piece of the pressure sensitive adhesive sheet with a width of 20 mm is bent at a radius of curvature of 3.0 mm, composite film has storage modulus of at 25°C of less than 2.0×10^8 Pa and a storage modulus at 100°C of 3.0×10^8 Pa or more, and the first film has a storage modulus at 25°C of 2.0×10^8 Pa or more would have been present. See *In re*

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Best, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection made above under 35 USC 102. Accordingly, Nagamoto strongly suggests or anticipates the claimed subject matter (see *In re Fitzgerald* 205 USPQ 594).

4. Claims 1-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-189762 (English translation provided by the examiner) in view of Yamamoto et al. (US 6,258,426B1).

JP 11-189762 (hereinafter '762) discloses a resin composition for an adhesive sheet substrate containing urethane acrylate (A) and a reactive diluent (B) (see page 2, claim 1). Further '762 discloses a substrate for an adhesive sheet comprising a cured film of the resin composition and an adhesive layer on one side or both sides of the adhesive sheet substrate (page 2, claims 6 and 7). Further '762 teaches that the adhesive sheet substrate in the present invention is a cured film consisting of the adhesive sheet substrate resin composition of the present invention. The cured film is obtained by applying the composition to a substrate (separating paper, separation treated PET film, etc.) using a comma coater, doctoring blade, screen printer, curtain flow coater or spray coater, irradiating the applied composition with activating energy (page 13, 0027). The adhesive sheet substrate such as a PET is equated to the first film comprising a material different from that of the composite film as claimed. Further the cured film formed of the resin composition containing urethane acrylate and a reactive diluent is equated to a composite film comprised by a composition containing a urethane polymer and a vinyl polymer as claimed. Regarding claims 8 and 10, '762 discloses that the thickness of the adhesive sheet substrate of the present invention is

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usually 1-1,000 μm and preferably 10-500 μ (page 13, 0027). Moreover, '762 teaches that adhesive sheet resin compositions were prepared based on the compositions in Table 1. These resulting resin composition were applied over the entire surface of PET film to a thickness of 100 μm and irradiated to cure the film (page 16, 0034).

'762 further teaches an adhesive layer. However, '762 is silent as to teaching of a pressure-sensitive adhesive. Yamamoto teaches an ultraviolet curing pressure-sensitive adhesive sheet wherein a pressure-sensitive adhesive layer is formed on one surface of a substrate film. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a pressure sensitive adhesive of Yamamoto as an adhesive layer in the invention of '762, motivated by the desire to form a suitable adhesive sheet of '762.

'762 modified by Yamamoto does not explicitly teach the presently claimed properties of pressure sensitive adhesive sheet has a modulus of 15 N/mm^2 or more and 250 N/mm^2 or less when an oblong piece of the pressure sensitive adhesive sheet with a width of 20 mm is bent at a radius of curvature of 3.0 mm, composite film has storage modulus of at 25°C of less than 2.0×10^8 Pa and a storage modulus at 100°C of 3.0×10^8 Pa or more, and the first film has a storage modulus at 25°C of 2.0×10^8 Pa, however it is reasonable to presume that said properties are necessarily present because like materials have like properties. The pressure sensitive adhesive sheet of the applicant comprises a composite film comprising urethane polymer and vinyl polymer wherein the first film is laminated on one side of the composite film, and a pressure sensitive adhesive layer is formed on the other side of the composite film.

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Further, the applicant is using acrylic type monomer as vinyl monomer. Moreover, the applicant is disclosing PET film as a preferred material for the first film (specification). Additionally, the applicant is disclosing an acrylic based pressure sensitive adhesive as a preferred adhesive (specification). '762 modified by Yamamoto also discloses an adhesive sheet wherein a resin composition comprising urethane acrylate is applied to an adhesive sheet substrate such as PET film and then radiation is used to cure the resin composition. Further, a pressure sensitive adhesive layer is applied on one or both sides of the adhesive sheet substrate. Thus, the presently claimed properties would have been present. Note that Reliance upon inherency is not improper even though rejection is based on Section 103 instead of Section 102 (see *In re Skoner*, et al. (CCPA) 186 USPQ 80).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5.. Claims 1-8 and 10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16 of copending Application No. 11/358,886. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-16 of 11/358,886 encompass the same subject matter as claimed by claims 1-8 and 10. Although, claims 1-16 of 11/358,886 does not explicitly teach the claimed properties of modulus, storage modulus as claimed in claims 1, 2, 6, and 7, it is reasonable to presume that said properties are necessarily present because like materials have like properties. The claims 1-16 of 11/358,886 essentially disclose pressure sensitive adhesive sheet as claimed by claims 1-8 and 10. Although claims 1-16 of 11/358,886 do not explicitly teach the thickness of the first film or the thickness of the composite film, choosing a proper thickness involves only a routine skill in the art. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the thickness of the first film and the thickness of the composite film as claimed in claims 7 and 10, motivated by the desire to form a strong and durable pressure-sensitive adhesive sheet.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

6. Applicant's arguments received on 08/21/06 with respect to claims 1-8 and 10 have been fully considered but are not found persuasive.

Applicant argues that the base sheet of Nagamoto which comprises a graft copolymer of a urethane polymer and a polymer consisting of reactive dilute [diluent] monomers has a completely different structure from that of the composite film of the present invention. The examiner respectfully disagrees. The applicant's arguments are not found persuasive in determination of patentability because applicant has not explicitly described why the structure of the base sheet (composite film) of Nagamoto is different. Additionally, note that the base sheet of the Nagamoto is formed from a liquid resin containing urethane acrylate and reactive dilute monomer such as morpholine acrylate (Example 1), which reads on "a composite film comprised by a composition containing a urethane polymer and a vinyl polymer as effective components" as claimed in claim 1. The obvious difference between the claimed invention and the reference of Nagamoto are not present in the claims. With respect to applicant's arguments that the Nagamoto does not teach the base sheet is laminated to the first film and that the Example 1 of Nagamoto shows that the PET film was temporarily used. The examiner respectfully disagrees. In response, the examiner is respectfully directing the applicant's attention to the examiner's comments set forth in the Advisory action dated 09/07/06, which are pertinent to these arguments.

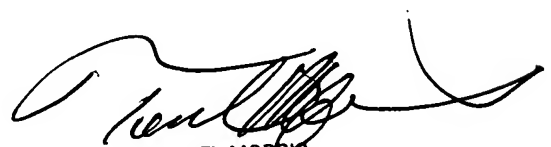
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anish Desai whose telephone number is 571-272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

APD



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